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Harlingen Irrigation District Newsletter

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New on our web site:

ADI Demonstration Site Information

Flow Meter Calibration Facility construction pictures

District wide rain gauges and weather information

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Texas Border Area Director and Rio Grande Watermaster (YTD) Summary By Carlos Rubinstein



Current Conditions

As of October 21, 2006, the U.S. combined ownership at Amistad/Falcon stands at 75.70% of conservation capacity (2,518,065) acre-feet (AF), down from 98.08% (3,262,297 AF) a year ago at this time. Overall the system is holding 63.12% (3,664,407 AF) of conservation capacity with Amistad at 81.96% (2,582,917 AF) and Falcon at 40.75% (1,081,485 AF). Mexico has 46.24% (1,146,342 AF) of the water it could store at Amistad/Falcon.

Allocations

As of the printing of the September ownership report we have allocated in excess of 369,908 acre-feet to Class A & B rights. We continue to have an amount in excess of 248,946 acre-feet for future allocations in 2006.

Storage & Loss Amistad vs. Falcon

We are currently storing approximately 1.89 million acre-feet at Amistad (107%) occupying 123,500 acre-feet of Mexico's space at Amistad (which is not an issue so long as Amistad is not above conservation capacity). We are currently storing approximately 623,436 acre-feet at Falcon (40.1%).

Our evaporation and seepage losses at Amistad YTD are 275,670 acre-feet. For the same period, we have lost 199,696 acre-feet at Falcon. The ratio of loss between Amistad and Falcon continues to consistently be 2:1 with Amistad being twice as efficient in overall storage and loss as compared to total amount in storage.

Releases to meet demands

Mexico has released 126,736 acre-feet from Amistad and 428,856 acre-feet from Falcon for their needs. The US has released 847,761 acre-feet from Amistad and 1,127,165 acre-feet from Falcon for our needs. Combined with gains between Amistad and Falcon, US inflows to Falcon have totaled 992,487 acre-feet.

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Texas Cooperative Extension's FARM Assistance Update



Dr. Steven Klose

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The 2005 demonstrations for surge irrigation technology vs. traditional furrow (flood) irrigation for cotton and sugarcane reflected the potential for 31% water savings in cotton and 52% in sugar cane. Under current water pricing structures, however, water savings do not necessarily translate into significant cost savings for producers. As a result, the Texas Cooperative Extension's Financial and Risk management Team (FARM Assistance) evaluated the 2005 results under \$1 and \$5/acre inch water pricing structures. In the cotton demonstration, total irrigation costs savings were 4% using surge at \$1/acre inch water costs. At \$5/acre inch, irrigation costs savings were about 22%. In the sugar cane demonstration, total irrigation costs savings using surge amounted to 20% at \$1/acre inch and 42% at \$5/acre inch. These examples clearly illustrated the value of water saving methods under conditions of limited water and/or volume pricing, and indicated potential incentives for producers to adopt conservation practices. FARM Assistance plans to also evaluate 2006 demonstration results.

FARM Assistance specialists have completed 10 analyses for demonstration participants, including 3 in 2005 and 7 so far in 2006. Individual studies have included irrigated cotton, corn, grain sorghum, sugarcane, vegetables, onions, citrus and other crops and have demonstrated furrow, surge, drip and micro-jet irrigation methods. FARM Assistance specialists are currently scheduled to work with five other cooperators in the project. Additionally, two analyses from 2005 will be updated. To find out more about the FARM Assistance program or to get an analysis of your operation, contact us on the web at: farmassistance.tamu.edu or call toll free at 1-877-TAMRISK.

FARM Assistance will continue to work directly with ADI cooperators in the Lower Rio Grande Valley to fulfill its responsibility for evaluating the farm-level financial impacts of water conservation techniques undertaken during the initiative. Individual studies evaluate the economic impacts of water conservation practices on the farming operations as well as demonstrate the financial benefits and/or viability as-

For more information visit
farmassistance.tamu.edu



On-site Installations with Citrus Farmers

Dr. Shad Nelson -TAMUK



Once we establish contact and reach agreements with local area citrus growers the next job is to install monitor-

ing systems on the assigned water conservation demonstration sites.

These sites may consist of traditional flood irrigation, narrow bordered flood, drip system or micro jet spray irrigation systems.

Using the Decagon ECH₂O probes and data loggers we measure soil volumetric water content and rainfall



onsite using a tipping bucket rain gauge. Probes are set typically at 6", 12", 24" and 36" inch depths. Soil samples are taken at each depth for particle size analysis, pH and electrical conductivity (EC). EC measurements give the salt content in each level of the soil and periodic sampling through-

out the growing season will assess salt accumulation under the various irrigation methods.

Signs were installed on different sites of collaborating grower's farms such as Jim Hoffman Orchards of Edinburg, Sharyland Orchards and Jim Pawlik of J & L Orchards. These sites were part of a demonstration tour for visitors from the High Plains region of Lubbock, TX this past summer.

Eddie Esquivel-TAMUK



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As is evident, we have met 72% of our overall needs in the middle and lower Rio Grande directly from Amistad this year. Keep in mind that this movement of water is primarily driven by our excess amount in storage at Amistad and the need to keep it below conservation capacity, particularly when we are occupying Mexico's space in Amistad

Upper Rio Grande (New Mexico) - Elephant Butte in New Mexico is currently storing 395,626 (19.55%) acre feet and Caballo Dam in New Mexico, downstream of Elephant Butte is storing 38,914 (17.14%) acre-feet. This water storage in part is used to meet water needs in the El Paso area.

Outlook-Late season monsoonal rains allowed Mexico to fill most all of their reservoirs in the Rio Conchos. This is a condition that has not existed since 1991-92. While overall deliveries of water by Mexico are just slightly below average due to the extensive drought we experienced for most of 2006, current basin conditions should provide for significant opportunities to mitigate the creation of a new debt when the current cycle ends in October 2007. Discussions between the two countries relative to deficit avoidance are ongoing. As is evident by our ownership reports, we have reduced our overall storage by 23% or some 744,000 acre-feet this year. Again, the extensive drought contributed to this reduction. We still anticipate most all accounts to begin 2007 with 100% usable balances. A continuation of drought conditions could result in a further reduction in reserves for the US, perhaps driving our total to approximately 50% by the end of 2007. Again, a return to wet conditions would mitigate this impact. It is important to recognize that the final payment of the water debt by Mexico continues to benefit the US this year. Absent that payment, our current reserves would be near 60% today as compared to the 75% we currently enjoy.